

REMARKS/ARGUMENTS

Favorable reconsideration of the present application is respectfully requested.

The claims have been amended to recite that the moving average values are calculated in one cycle length of the transfer belt (image receiving means). Basis for this, is found, for example, at lines 15 and 21 of page 16 in the specification. The claims have further been amended to recite that the moving average values are calculated with elimination of a speed variation component of the image carrier (image carrying means) by low pass processing. Basis for this can be found, for example, at lines 6-7 of page 17 in the specification.

According to a feature of the invention set forth in the claims, position errors in a color toner image carried on a transfer belt due to a position shift of the color image can be more simply carried out by separating out a speed variation component of the image due to speed variations of the image carrier from the speed variation component of the image due to speed variations of the transfer belt and arising from variations in the thickness of the transfer belt. For example, referring to Figure 4 of the present specification, a detected image position shift amount is shown for a single cycle length of the transfer belt. As is evident from this figure, the image position shift amount varies with a high frequency component which is due to factors including a speed variation of the image carrier 2Y. It also includes a low frequency component having a frequency equal to one cycle length of the transfer belt. This represents a speed variation due to variations in the thickness of the belt. Therefore, the high frequency component of the speed variation due to the image carrier 2Y may be eliminated in each belt cycle by low pass filtering or processing (page 17, lines 6-7). Accordingly, the claims have been amended to recite calculating a moving average value of the position shift data, with elimination of a speed variation component of the image carrier by low pass processing, in one cycle length of the transfer belt.

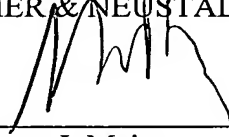
Claims 1-33 were rejected under 35 U.S.C. § 102 as being anticipated by U.S. patent 6,038,423 (Tagawa et al.). An operation to correct a color image shift on a transfer belt of an image formation device is shown in Figure 4 of this reference. In accordance with this process, data of the speed variation or position variation occurring at a transfer time is acquired *over several cycles* of the intermediate transfer belt at step S53, and variations other than those due to the thickness unevenness component of the intermediate transfer belt are removed by averaging the speed or position variation data acquired over the several cycles of the intermediate transfer belt 7 (column 8, lines 1-9). More particularly, referring to Figure 8 and lines 8-31 of column 10, since the cycle of the other causes of speed variations will be asynchronous with the cycle the thickness unevenness of the intermediate transfer belt 7, by measuring speed variations *over several cycles* and averaging the same, those variations which are not synchronous with the cycle of the transfer belt will be removed, and only the image position shift component caused by the transfer belt thickness unevenness will remain.

Accordingly, although Tagawa et al. discloses eliminating speed variation components of the image carrier in order to correct a shift position in a color toner image formed on a transfer belt, Tagawa et al. does so by averaging over several cycles of the length of the transfer belt, and not by low pass processing in one cycle length of the transfer belt as is now recited in the claims. Since the claimed invention is able to eliminate speed variation components of the image carrier in a single cycle, its response time is advantageously faster than that of Tagawa et al. The amended claims therefore define over this reference.

Applicants therefore believe that the present application is in condition for allowance and respectfully solicit an early Notice of Allowability.

Respectfully submitted,

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